

ENGLISH OF LEATHER MAKING LESSONS FOR ADULT ENGLISH CLASSES

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FOREWORD

This series of lessons in "The English of Leather Making" has a two-fold purpose:

1. To meet the need for special lessons showing the processes in making leather and giving enough technical vocabulary so that the pupils may understand work instructions and safety precautions.

2. To teach each worker enough about every step in the process of manufacture, from raw materials to finished article, so that he will have a thorough understanding of the relation of his job to the work of the plant as a whole.

These lessons cover hide and sheep-skin tanning. They were compiled by George F. Quimby, Industrial Service Secretary of the Associated Industries of Massachusetts and Charles H. Paull, of the Bureau of Vocational Guidance at Harvard University, with the constant aid and generous co-operation of executives, foremen and other employees of the A. C. Lawrence Leather Company of Peabody, Massachusetts.

That Company unhesitatingly opened its plant for the work and furnished not only every possible assistance but also provided the photographs from which the cuts for the lessons were made.

Each lesson has been carefully reviewed by those familiar with tanning and by the teachers who have charge of instruction in English classes of adult aliens at the A. C. Lawrence plant.

We hope these lessons will be found practical, both as to technical material and as to requirements for English Classes.

Undoubtedly the need for improvements will develop as the lessons are used. We earnestly solicit suggestions for improvements which can be made in future issues.

INDUSTRIAL SERVICE DEPARTMENT
Associated Industries of Massachusetts
1034 Kimball Building
BOSTON, MASSACHUSETTS
November, 1919.

20-9411

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LESSON 1



UNLOADING HIDES FROM A FREIGHT CAR

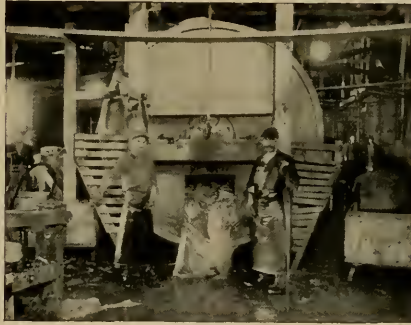


OPENING BUNDLES AND TRIMMING

UNLOADING AND OPENING

- | | |
|------------------------------|---|
| 1. work | I work in a tannery. |
| 2. make | A tannery is a factory where we make leather. |
| 3. make | We make leather from hides and skins. |
| 4. come | Hides come from cows and steers. |
| 5. come | Skins come from sheep, goats and pigs. |
| 6. get | Tanneries get hides and skins from the United States. |
| 7. get | Tanneries get hides and skins from many other countries. |
| 8. call—
come | We call hides and skins raw stock when they come to the tannery. |
| 9. is—will
will not spoil | Raw stock is greensalted, dried or pickled.
It will not spoil. |
| 10. come | The hides come to the tannery. |
| 11. unload | I unload them from the freight car. |
| 12. open | My partners open the bundles of raw stock. |
| 13. cut off
will make | They cut off the parts that will not make leather. |
| 14. are | Some of these parts are the ears and tail. |
| 15. call | I call this trimming. |
| 16. do know
lived | Do you know what hides and skins come from the country where you lived? |

LESSON 2



PINWHEEL

SOAKING AND WASHING

- | | |
|---------------------------|---|
| 1. unload | I unload hides from the freight car. |
| 2. have | They have salt and dirt on them. |
| 3. must clean off | I must clean off the dirt and salt. |
| 4. put—to soak | I put the hides into vats of water to soak them. |
| 5. are | The vats are below the floor. |
| 6. takes out | The water takes out most of the salt and dirt. |
| 7. pull | Then my partner and I pull the hides from the vat with tongs. |
| | |
| 8. put—to wash | My partner and I put the hides into the pinwheel to wash them. |
| 9. push | I push the shipper. |
| 10. turns | The pinwheel turns. |
| 11. are clean | When the hides are clean, I pull back the shipper. |
| 12. must lock | I must lock the shipper. |
| 13. stops | The pinwheel stops. |
| 14. put—take out | I put my head and shoulders into the pinwheel.
I take out the hides. |
| 15. do not lock—may start | If I do not lock the shipper, the pinwheel may start. |
| 16. may be killed | I may be killed. |

LESSON 3



FLESHING MACHINE



PADDLE WHEELS

FLESHING AND LIMING

- | | |
|--------------------|---|
| 1. must take | We must take the pieces of flesh from the rawstock. |
| 2. soak—soften | When we soak the rawstock, we soften the flesh. |
| 3. truck | We truck the hides from the pinwheel to the fleshing machine. |
| 4. cut off | We cut off the flesh in a fleshing machine. |
| 5. truck | Now we truck part of the hides to the lime pits. |
| 6. look | Lime pits look like soaking vats. |
| 7. loosens | The lime liquor in the lime pit loosens the hair. |
| 8. truck | We also truck part of the hides to the paddle wheels. |
| 9. take off | Why do we take off the flesh from the hides? |
| 10. put | I put the hides in the vat of the paddle wheel. |
| 11. turns around | The paddle turns around in the lime liquor. |
| 12. loosens | The lime liquor in the paddle wheel loosens the hair. |
| 13. must wear | I must wear clean rubber gloves. |
| 14. must wash | I must wash my hands and gloves often. |
| 15. leave—burn | If I leave lime on my hands, it will burn them. |
| 16. must go— | I must go to our doctor at once if the lime burns me. |
| 17. makes | Handling wet hides makes the floor wet and slippery. |
| 18. am not careful | If I am not careful, I may slip and fall. |

LESSON 4



UNHAIRING MACHINE



SORTING HIDES

UNHAIRING, SORTING AND TRIMMING

- | | |
|---------------------------|---|
| 1. pull | We pull the hides from the lime. |
| 2. truck | We truck the hides to the unhairing machines. |
| 3. must use | We must use two unhairing machines. |
| 4. pulls out | One pulls out the coarse hair. |
| 5. pulls out | The other pulls out the fine hair. |
| | |
| 6. look to see
is left | We look carefully to see if any hair is left on the hide. |
| 7. must scrape | If any hair is left, we must scrape it off with a knife. |
| 8. make | We make different kinds of leather from hides. |
| 9. make | Hides which do not have grub holes, brands or scratches, make the best leather. |
| 10. look | I look at the hides carefully for grub holes, brands and scratches. |
| 11. put | I put each kind of leather into a different pile. |
| 12. call | I call this sorting. |
| | |
| 13. to go | Some parts of the hide are too thick to go through the splitting machine. |
| 14. trim | I trim them off while I sort the hides. |
| 15. is | The floor in the beamhouse is wet and slippery. |
| 16. be careful | I must be careful not to slip and fall. |

LESSON 6



DANGER! THE SHIPPER IS NOT LOCKED



A CAREFUL WORKMAN

TANNING

1. truck We truck the hides from the beamhouse to the tannery.
2. to make— We tan the hides to make the leather last a last long time.
3. was Twenty-five years ago all hides were tanned with bark from trees.
4. soaked They soaked the hides in water with bark from oak and hemlock trees (in it).
5. takes Bark tanning takes about three weeks.
6. call Sometimes we call bark tanning extract tanning.
7. put We put the hides into vats for bark tanning.
8. put We put splits into tanning wheels for bark tanning.
9. tan We now tan many hides by chrome tanning.
10. takes Chrome tanning takes only about three days.
11. put I put the hides into the tanning wheel.
12. has The tanning wheel has chrome liquor in it.
13. close I close the door and pull the shipper.
14. turns The tanning wheel turns.
15. throws It throws the liquor over the hides.
16. is Is there a lock for the shipper?
17. is What is the lock for?

LESSON 7



SHAVING MACHINE



TRUCKING HIDES

SHAVING AND COLORING

1. take We take chrome hides from the tanning wheel.
2. put We put them in the shaving machine.
3. shaves off The shaving machine shaves off the rough parts of the hide.
4. haul The truckers haul the hides to the color department.
5. put I put the hides into fat-liquor.
6. makes The fat-liquor makes the leather soft.
7. is The fat-liquor is in a wheel like a tanning wheel.
8. take I take the leather from the fat-liquor wheel.
9. haul I haul the leather to the color wheel.
10. is colored Leather is colored black, brown and many other colors.
11. is The color wheel is like the fat-liquor wheel.
12. take When I take the leather from the wheel, I must be careful.
13. is locked— If the shipper is not locked, the wheel may may turn turn.
14. may be I may be caught and killed.
 caught
15. slip I must be careful not to slip in the color department.



LESSON 8



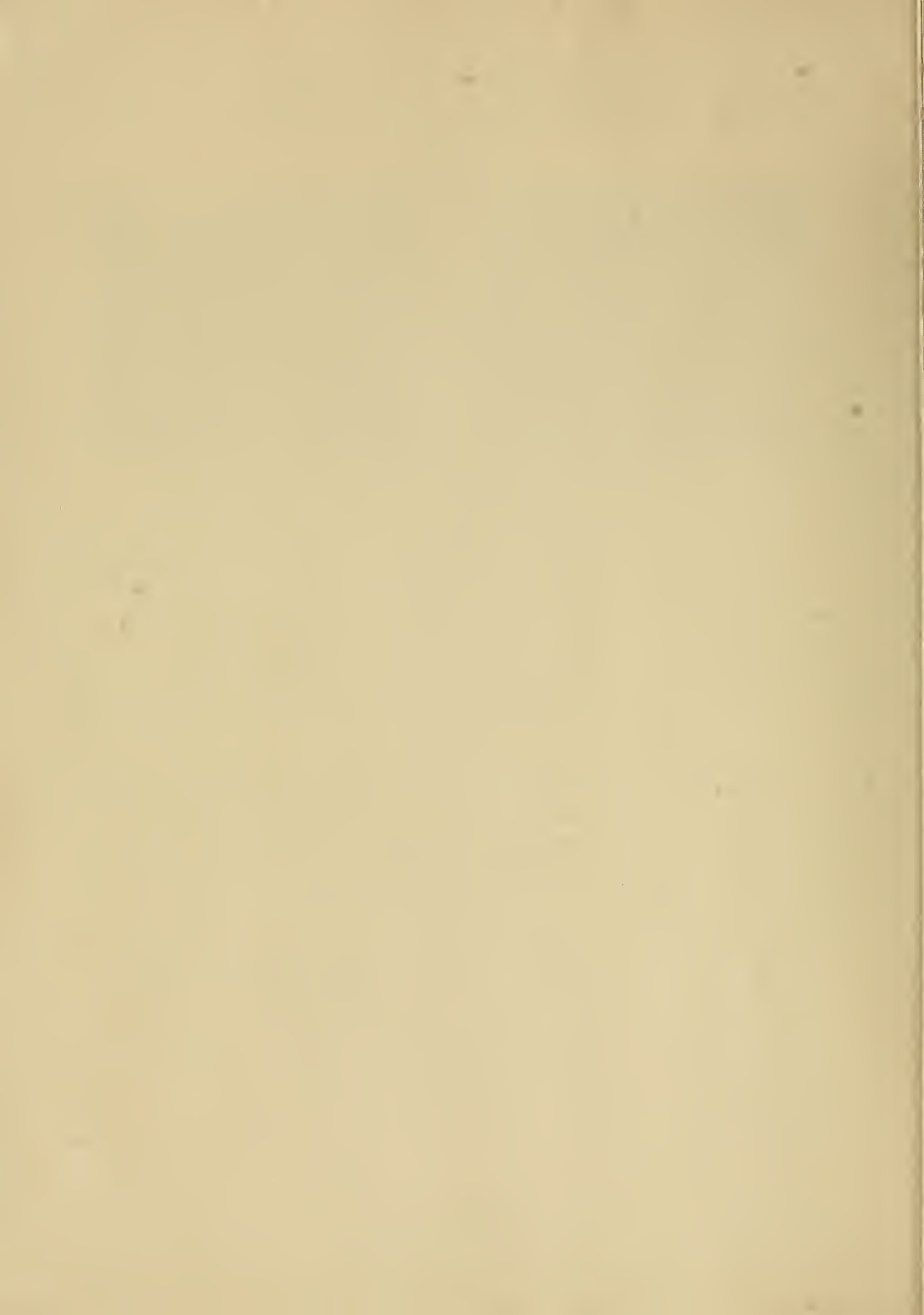
BUFFING WHEEL



TACKING LEATHER

BUFFING AND TACKING

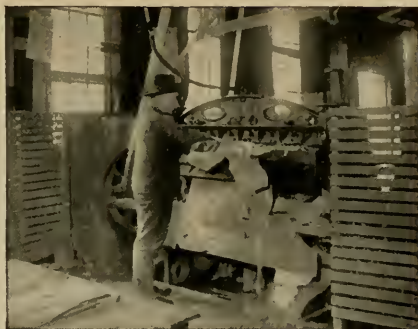
- | | |
|----------------|---|
| 1. put | I put the leather on the buffing wheel. |
| 2. is covered | The buffing wheel is covered with emery. |
| 3. turns | The buffing wheel turns very fast. |
| 4. is hard | The grain of the leather is hard. |
| 5. takes off | The buffing wheel takes off the hard part of the grain. |
| 6. stretch | The tackers stretch a wet side of leather on a tacking board. |
| 7. drive | They drive tacking nails around the edges of the leather. |
| 8. hold | The tacking nails hold the leather on the tacking board. |
| 9. dry | Tacking stretches the leather so that it can dry out smooth. |
| 10. are pulled | When the leather is dry, the tacking nails are pulled out. |
| 11. call | We call this stripping. |
| 12. have | Tacking nails have sharp points. |
| 13. hurt | If we hurt our hands we must go to the doctor. |



LESSON 9



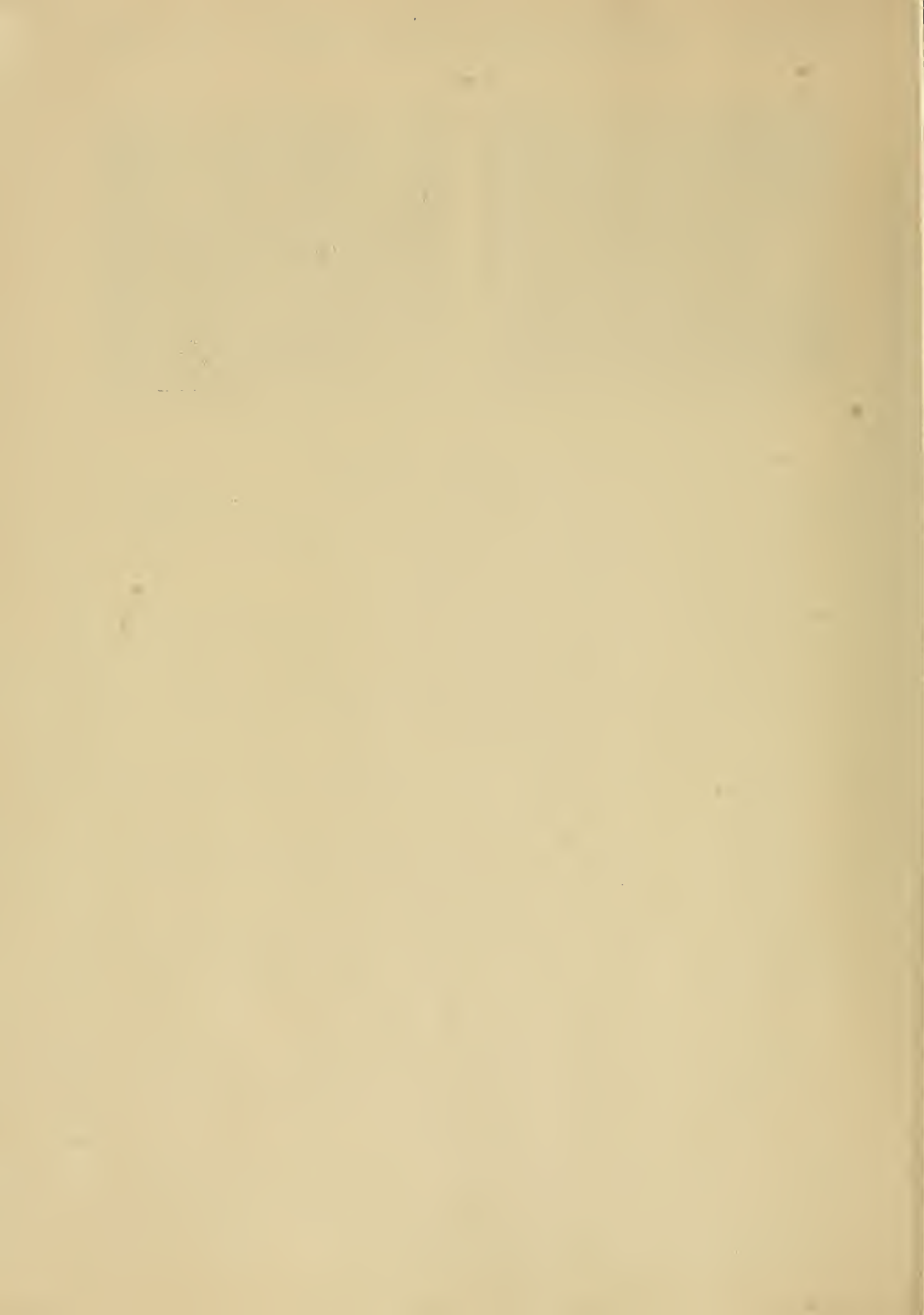
JACKING MACHINE



SPLITTING MACHINE (Back View Showing
Grain and Split)

JACKING AND SPLITTING

1. take I take bark-tanned leather to the curry shop.
2. put I put the leather into a tub of water.
3. softens The water softens the leather.
4. pull out I pull the leather out.
5. throw over I throw it over to the jacking machine.
6. makes The jacking machine makes the leather flat for the splitting machine.
7. do not split We do not split bark-tanned leather in the beamhouse.
8. skive — We must skive bark-tanned leather before split we split it.
9. is skived Leather is skived in a splitting machine.
10. skive — When we skive the leather, we shave off shave the rough parts.
11. split We split the leather in a splitting machine.
12. puts into The feeder puts the leather into the splitting machine.
13. splits The splitting machine splits the leather into two pieces of leather.
14. is called One piece is called the “grain,” the other is called the “split.”
15. is The grain is the hair side of the leather.
16. is The split is the flesh side of the leather.
17. take We take the “grain” and the “split” from the splitting machine.



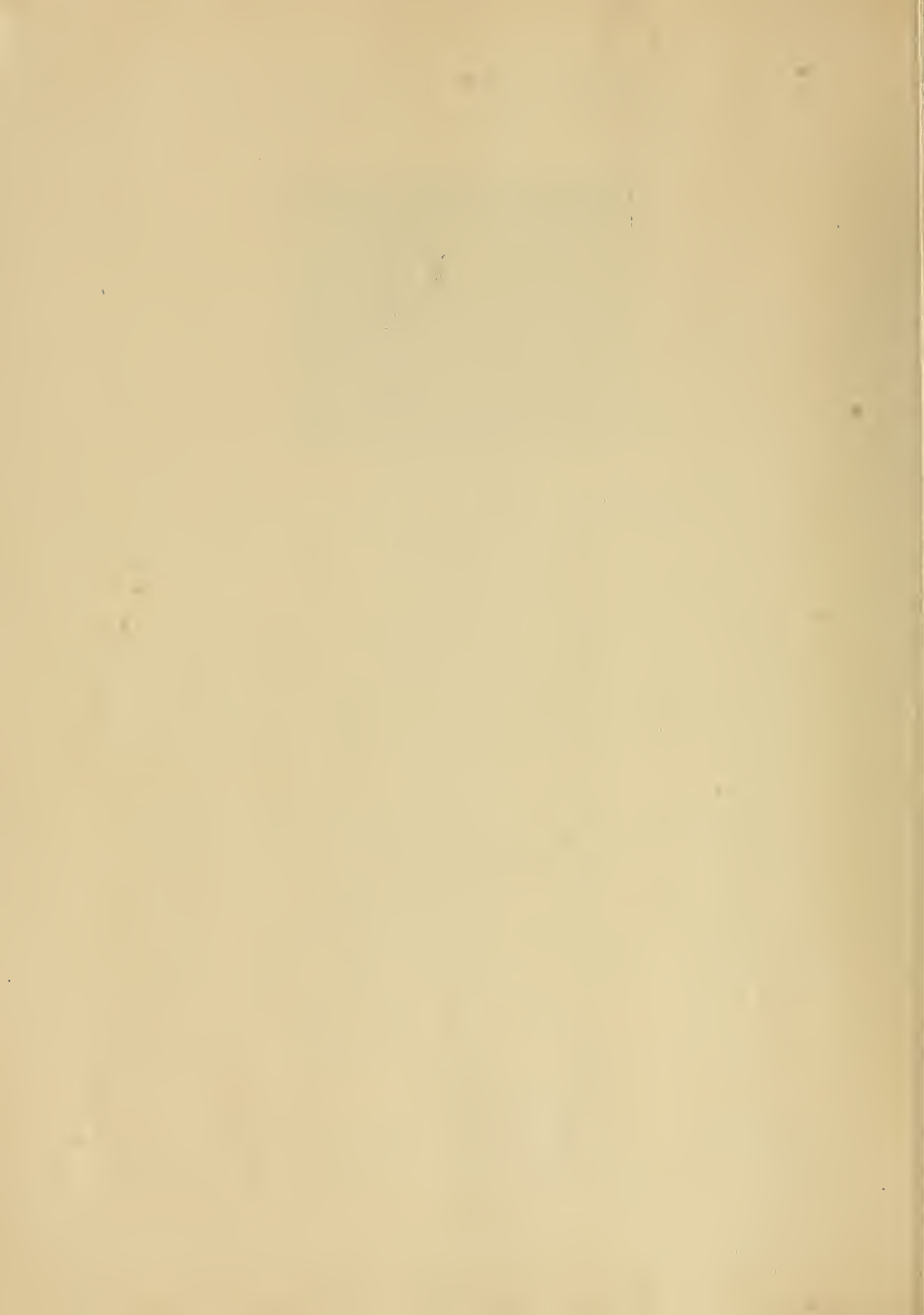
LESSON 10



SPRAYING LEATHER

RETANNING AND MILLING OR STUFFING

- | | |
|----------------|--|
| 1. tan | We tan bark-tanned leather again in the curry shop. |
| 2. call | We call this retanning. |
| 3. retan | We retan leather in a pinwheel. |
| 4. take | We take the leather from the pinwheel. |
| 5. hang—to dry | We hang up the leather on sticks to dry. |
| 6. take | We take down the leather when it is dry. |
| 7. is | The leather is very dry and hard. |
| 8. must dampen | We must dampen it to make it soft. |
| 9. dip | I dip the leather in a tub of water. |
| 10. hand | Then I hand the leather to my partner. |
| 11. sprays | My partner sprays the leather with a hose. |
| 12. spread | We spread the leather out in piles. |
| 13. pack | We pack down these piles with damp burlap for two or three days. |
| 14. put | Then we put the leather into pinwheels with grease. |
| 15. call | We call this milling or stuffing. |
| 16. is | Grease is good for many kinds of leather. |
| 17. watch — is | Watch your step. The floor is slippery. |



LESSON 11



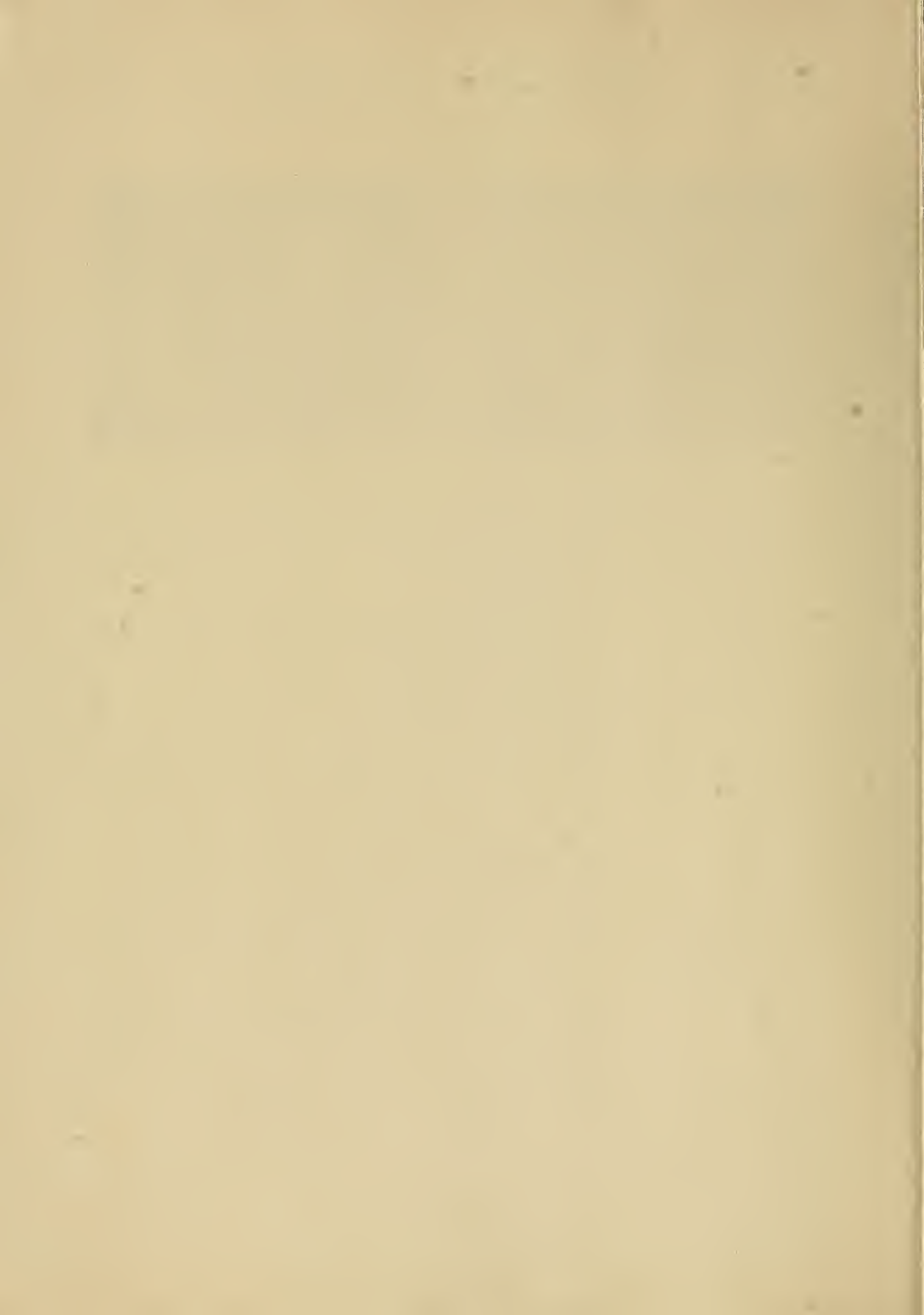
PUTTING OUT MACHINE



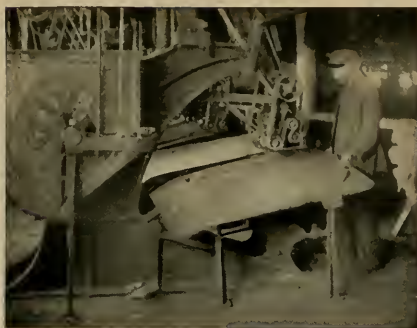
HAND SETTING OUT

MACHINE AND HAND SETTING OUT

- | | |
|------------------------|---|
| 1. truck | We truck the leather to the putting-out machine. |
| 2. put | I put the leather on the drum of the putting-out machine. |
| 3. pull | I pull the shipper. |
| 4. carries | The drum carries the leather to the rolls. |
| 5. is | There is too much grease on the leather. |
| 6. scrape off | The rolls scrape off some of the grease. |
| 7. truck | Then we truck the leather to the setters. |
| 8. lay | The setters lay the leather on tables. |
| 9. put | They put out the leather with slickers. |
| 10. put out
to make | The setters put out the leather to make it flat and smooth. |
| 11. hang | The setters hang up the leather on sticks. |
| 12. is | We put the leather in piles when it is dry. |
| 13. is called | This is called packing down. |



LESSON 12



WHITENING MACHINE



BLACKING MACHINE

WHITENING AND BLACKING

1. truck We truck the leather to the whitening machine.
2. shaves The whitening machine shaves off the rough parts of the leather.
3. call We sometimes call whitening cutting-over.
4. have The rolls on the whitening machines have knives on them.
5. must keep I must keep my fingers away from the knives.
6. trim We trim the edges of the leather with a knife.
7. is The leather is ready for coloring.
8. color We color it in a blacking machine.
9. stand I stand in front of the machine.
10. push I push the leather to the rolls of the blacking machine.
11. spreads The brush in the blacking machine spreads the color on the leather.
12. must be I must be careful.
13. may crush The rolls of the blacking machine may crush my fingers.
14. take My partners take the leather from the other side of the blacking machine.
15. hang Then they hang the leather on sticks to dry.



LESSON 13



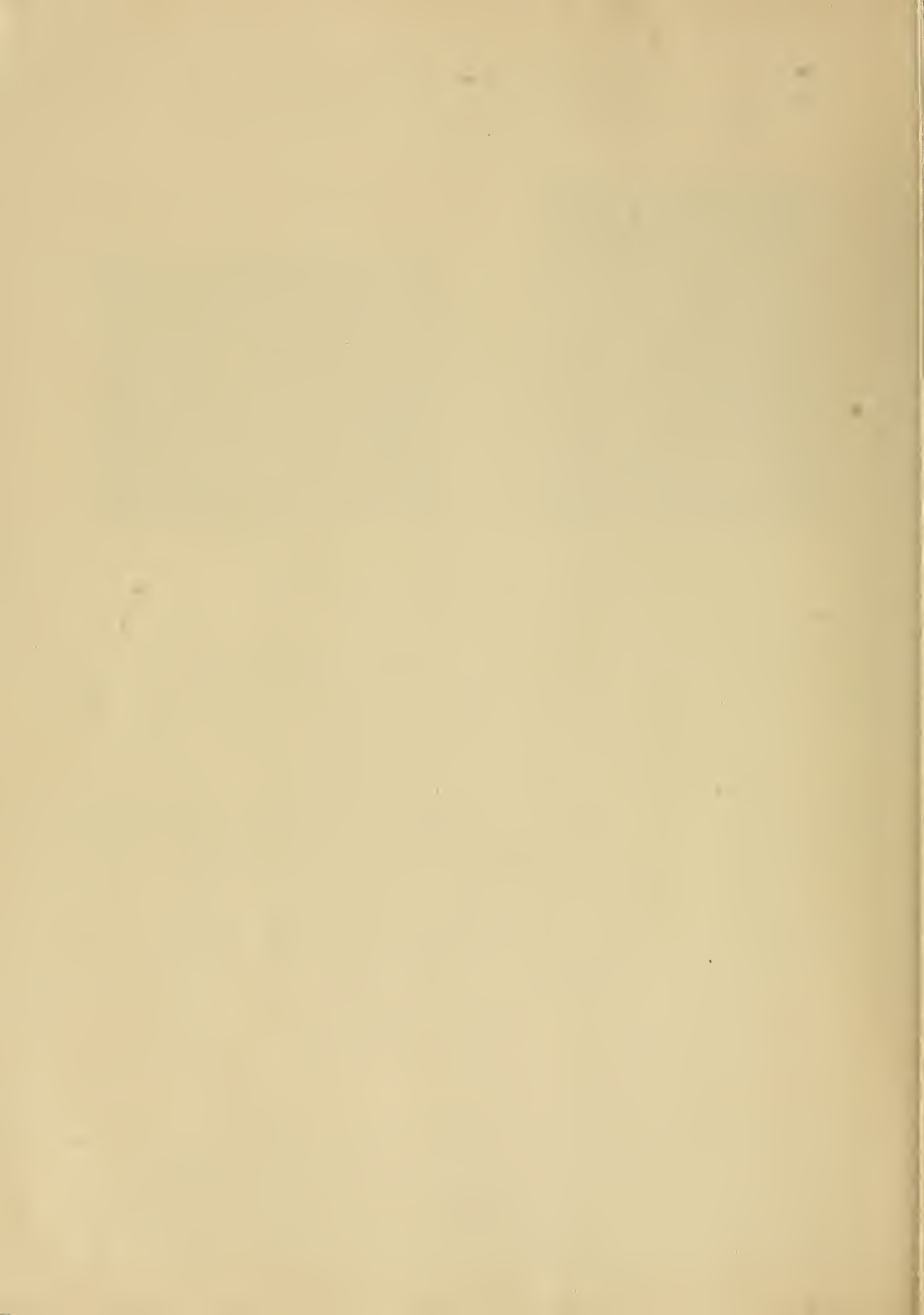
EMBOSSING MACHINE



GRAINING LEATHER

FINISHING GUN-METAL OR SPLITS

- | | |
|--------------------|--|
| 1. is dry | The leather is dry. |
| 2. season | We are ready to season the leather. |
| 3. put | We put seasoning liquor on the leather with a brush. |
| 4. makes | Seasoning makes the leather look better. |
| 5. take | We take the leather to the embossing machines. |
| 6. press | We press the leather in an embossing machine. |
| 7. make | Plain embossing plates make the leather smooth. |
| 8. print | Other embossing plates print designs on the leather. |
| 9. must be careful | I must be careful. |
| 10. may crush | The embossing machine may crush my hands. |
| 11. board grain | We board or grain some leather. |
| 12. has | The grainer has an arm-board on his arm. |
| 13. rubs | He rubs the leather with the arm-board. |
| 14. makes | He makes the leather soft with the arm-board |
| 15. cuts | The trimmer cuts off the rough edges. |



LESSON 14



SORTING AND BUNDLING

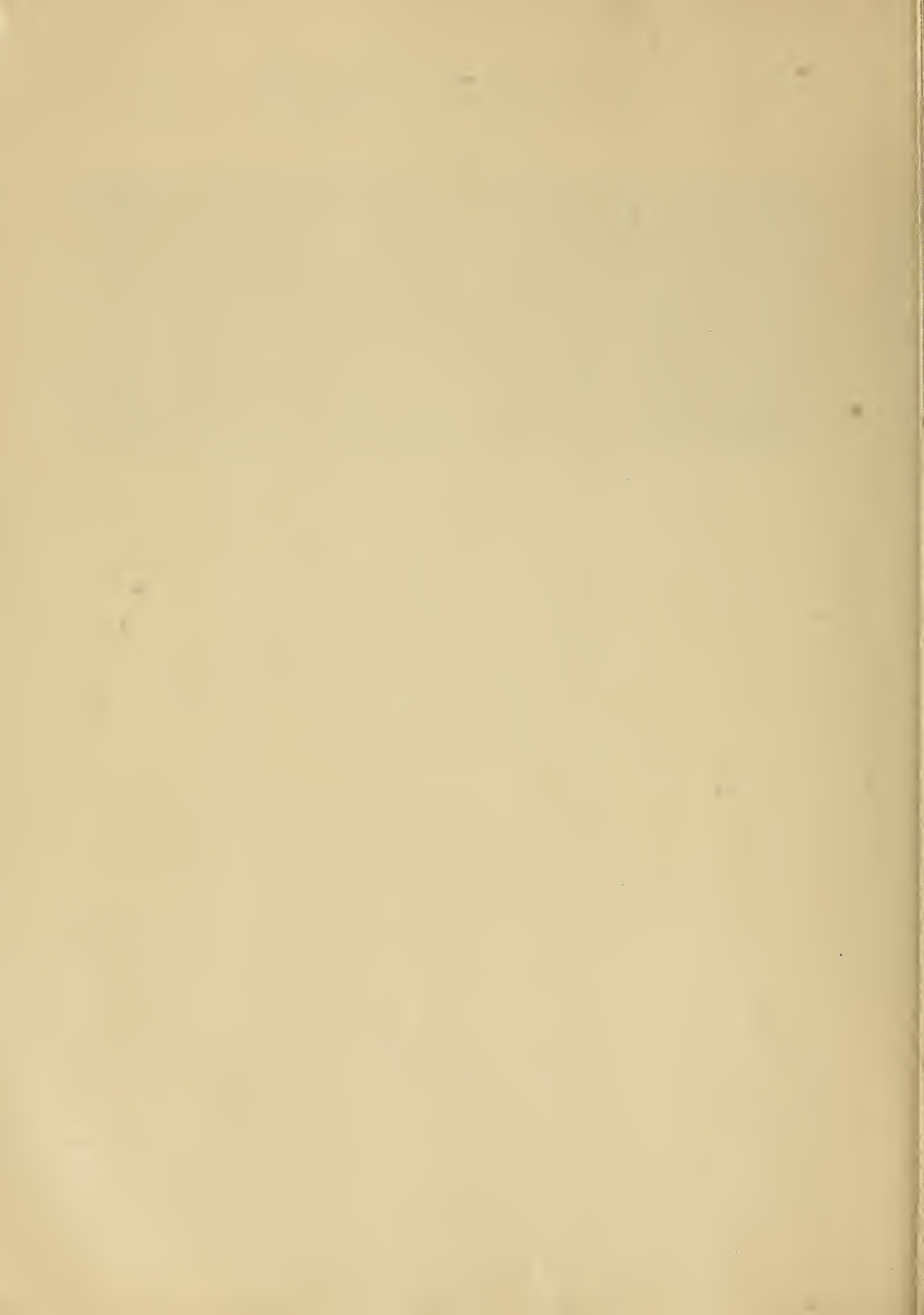


MEASURING MACHINE

SORTING, MEASURING, BUNDLING AND SHIPPING

- | | |
|------------------------|--|
| 1. is finished | The leather is finished. |
| 2. call | We call it finished leather. |
| 3. must sort | We must sort the leather. |
| 4. puts | The sorter puts the leather on horses. |
| 5. puts | He puts the heaviest and best leather on one horse. |
| 6. puts | He puts the rest on different horses. |
| 7. sell | We sell leather by the square foot. |
| 8. put | I put the leather in the measuring machine. |
| 9. tells | The measuring machine tells me how many square feet there are in a piece of leather. |
| 10. tie | I tie the leather in bundles. |
| 11. wrap | I wrap the bundles in paper. |
| 12. is ready | The leather is ready to ship. |
| 13. put | We put it in a freight car. |
| 14. are made | Many things are made from leather. |
| 15. know —
are made | Do you know some things that are made from leather? |

[Note. This lesson should also be used as Lesson 25.]



LESSON 15



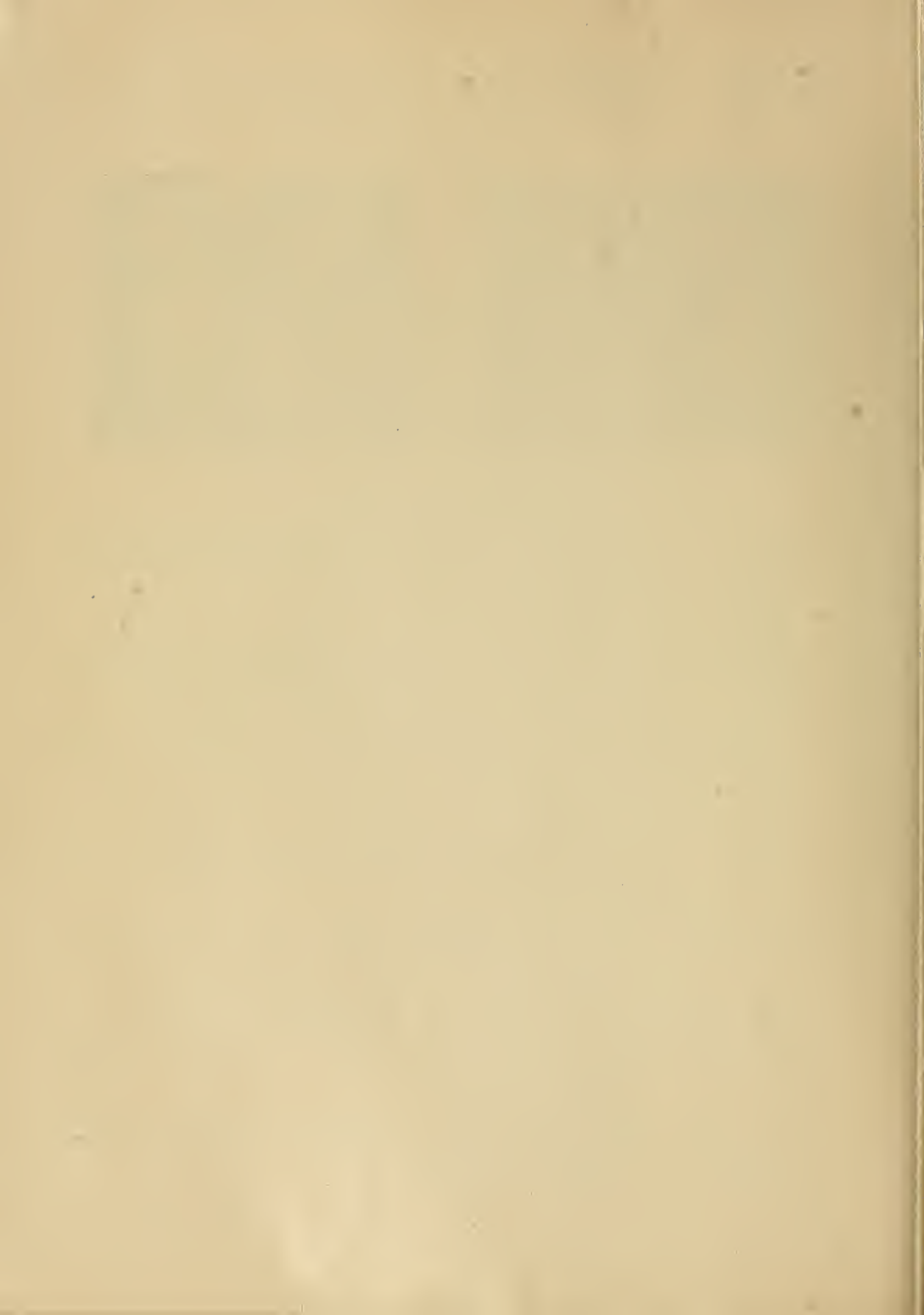
BUNDLES, CASE AND CASK OF SHEEPSKINS



SORTING AND COUNTING SHEEPSKINS

COUNTING AND SORTING

- | | |
|------------------------|--|
| 1. come | Sheepskins come in bundles, cases and casks. |
| 2. unload
count | After we unload the sheepskins we count the bundles. |
| 3. count | Then we count the sheepskins in each bundle. |
| 4. must be | There must be twelve sheepskins in a bundle. |
| 5. are | There are twelve sheepskins in a dozen. |
| 6. is — tell | If there is not a dozen in a bundle, we tell the foreman. |
| 7. come | Sheepskins from the United States come in bundles. |
| 8. come | Sheepskins from other countries come in cases and casks. |
| 9. keep | We keep different kinds of sheep skins in separate lots. |
| 10. says | The foreman says, "Keep the lots separate." |
| 11. must stamp | I must stamp every sheepskin in a bundle. |
| 12. take | Then the truckers take the bundles to the sorters. |
| 13. sort — to
make | The sorters sort the skins to make different kinds of leather. |
| 14. makes | The fat from the skins makes the floors slippery. |
| 15. must be
careful | I must be careful not to fall. |



LESSON 16



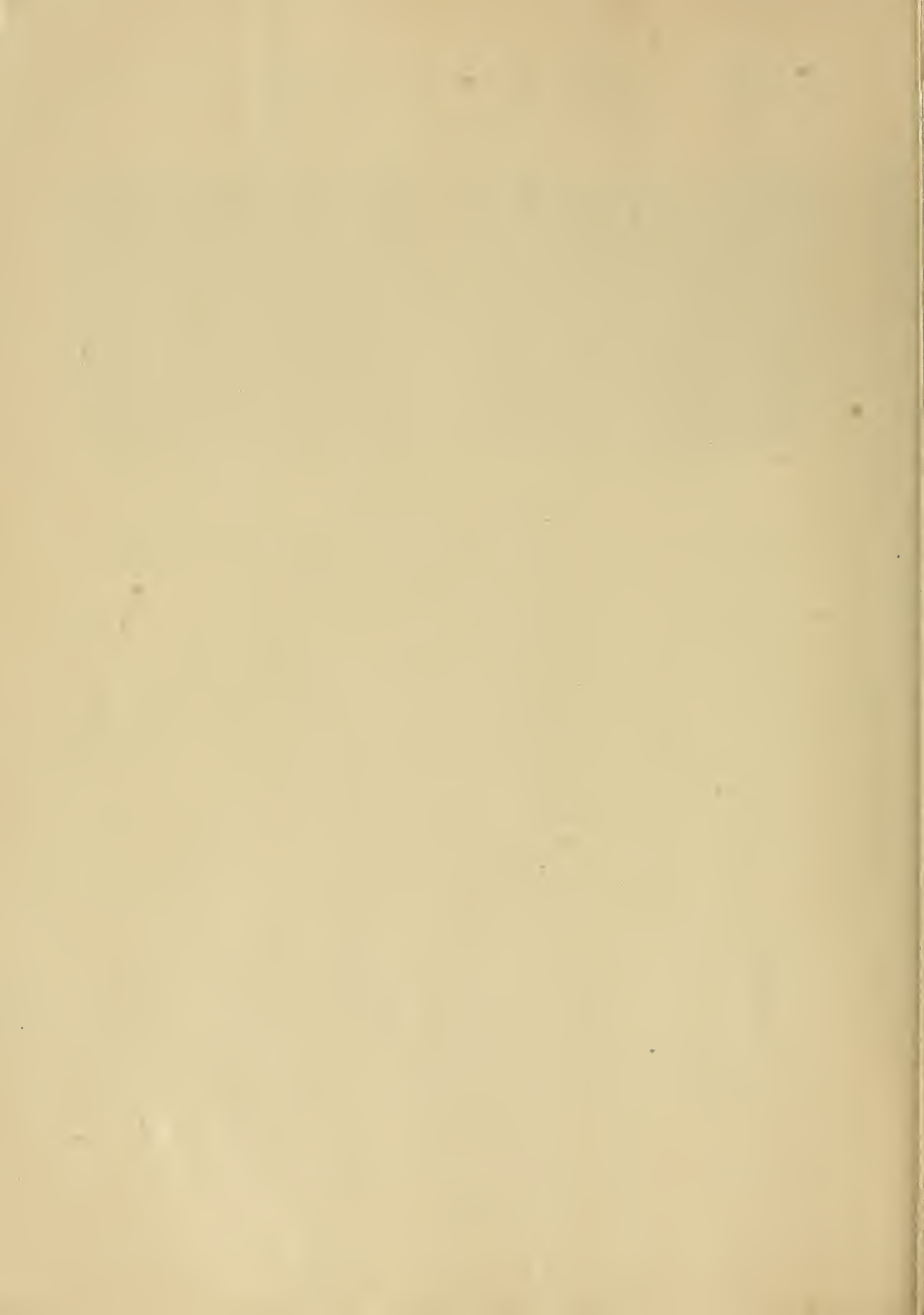
FLESHING MACHINE



BUILDING PACKS FOR SHEEPSKIN PRESSES

FLESHING AND PRESSING

1. truck We truck the sheepskins from the sorters to the fleshing machines.
2. truck Sometimes we truck them to the presses first.
3. is There is flesh on the raw stock.
4. put I put the skin into the fleshing machine.
5. are There are sharp knives on the cylinder of the fleshing machine.
6. cut off The knives cut off the flesh.
7. must keep I must keep my hands from between the rolls.
8. need I need both my arms.
9. have The skins have grease in them.
10. build I build them into a pack for the press.
11. put I put the pack into the press.
12. presses The press presses out the grease.
13. presses The press presses each pack into a solid bundle.
14. call We call the bundles "cakes."
15. must not slip I must not slip on the greasy floor.



LESSON 17



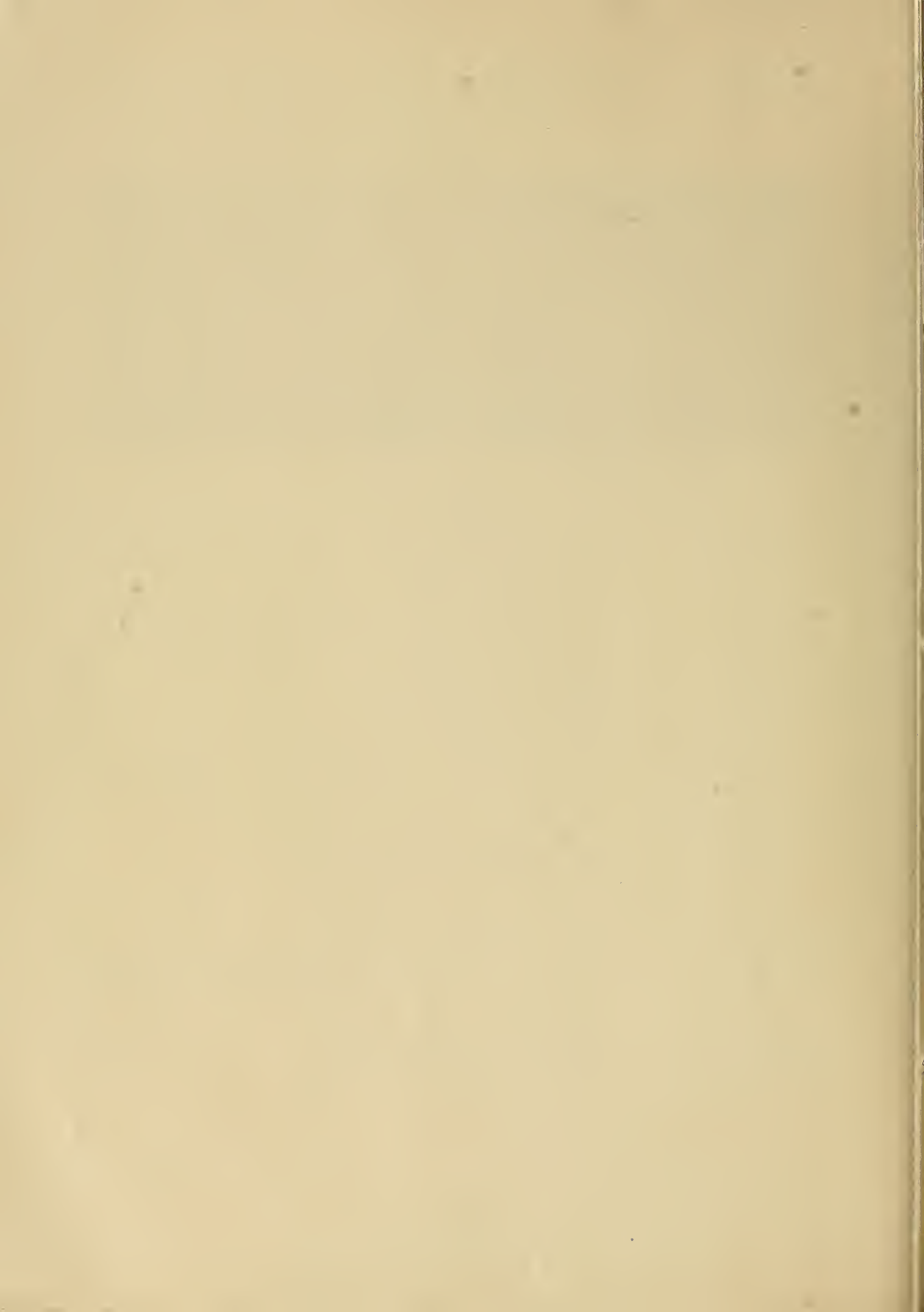
TRUCKING SHEEPSKINS



DANGER! THE SHIPPER IS NOT LOCKED!

MILLING

- | | |
|------------------|--|
| 1. truck | We truck the cakes from the presses to the tan cellar. |
| 2. put | I put the cakes of skins into a pinwheel. |
| 3. put | I put salt water into the pinwheel. |
| 4. pull | I pull the shipper. |
| 5. turns | The pinwheel turns. |
| 6. breaks | The pinwheel breaks up the cakes. |
| 7. softens | The pinwheel softens and washes the skins. |
| washes | |
| 8. are clean | The skins are clean and soft. |
| 9. pull | I pull back the shipper. |
| 10. must lock | I must lock the shipper. |
| 11. stops | The pinwheel stops. |
| 12. put | I put my head and shoulders into the pinwheel. |
| 13. take out | I take out the skins. |
| 14. pile | I pile them on a truck. |
| 15. did not lock | Joe did not lock the shipper. |
| 16. was killed | He was killed. |



LESSON 18



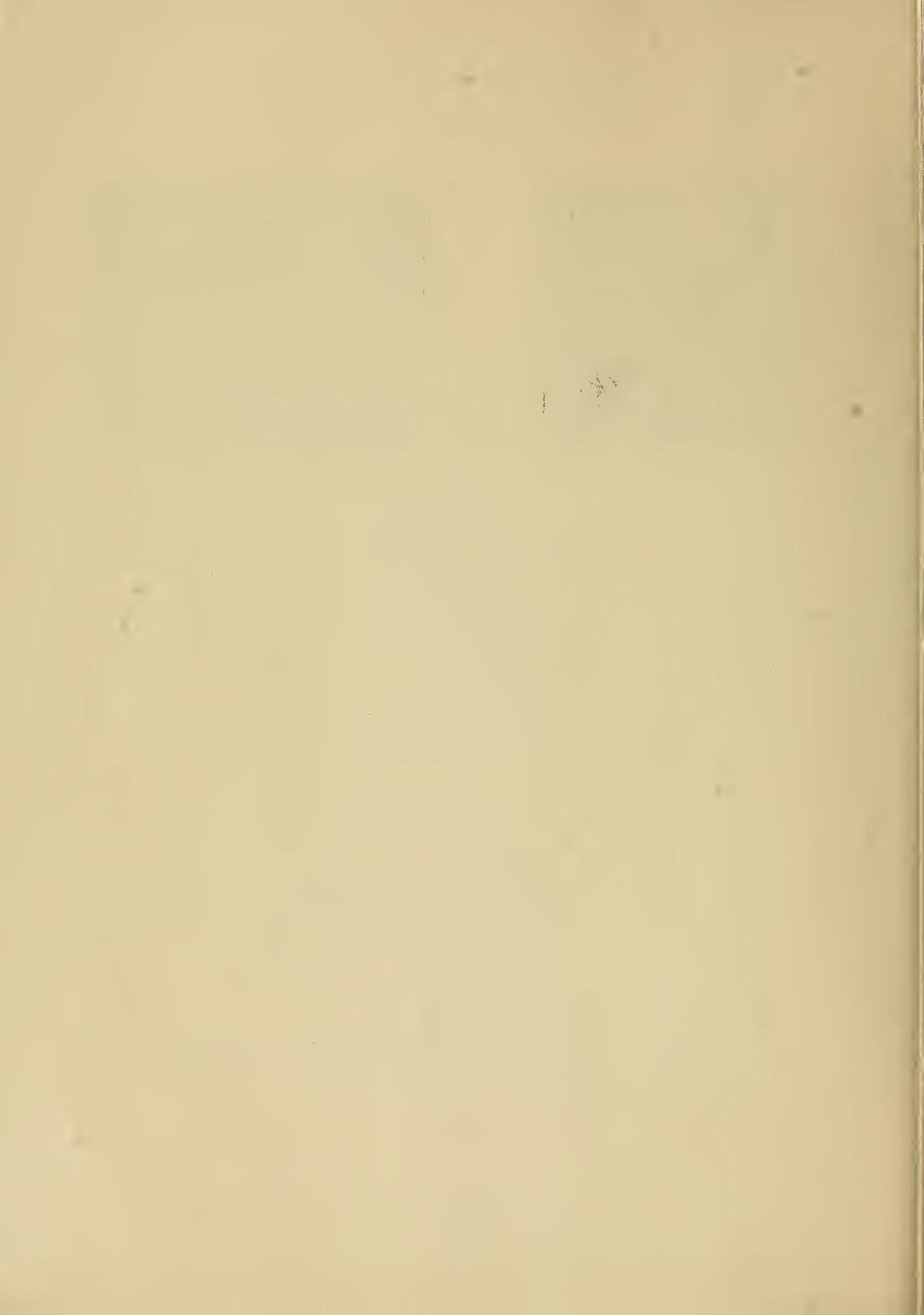
TANNING LIQUOR IS BOILING HOT



PUTTING LIQUOR INTO TANNING WHEEL

TANNING

- | | |
|---------------------|--|
| 1. truck | I truck the skins to a tanning wheel. |
| 2. is | A tanning wheel is a pinwheel. |
| 3. says | The foreman says, "Weigh the skins." |
| 4. says | Sometimes the foreman says, "Count the skins." |
| 5. mix | I mix the tanning liquor. |
| 6. boil | I boil some of the liquor. |
| 7. says | The foreman says, "Do not burn yourself." |
| 8. has | Some tanning liquor has acid in it. |
| 9. am careful | I am careful not to spill acid on myself. |
| 10. put | I put the skins into the tanning wheel. |
| 11. pour | I pour tanning liquor into the tanning wheel. |
| 12. pull | I pull the shipper. |
| 13. turns | The wheel turns. |
| 14. tans | The tanning liquor tans the skins. |
| 15. take out | I take out the skins. |
| 16. must be careful | Why must I be careful when I take out the skins? |



LESSON 19



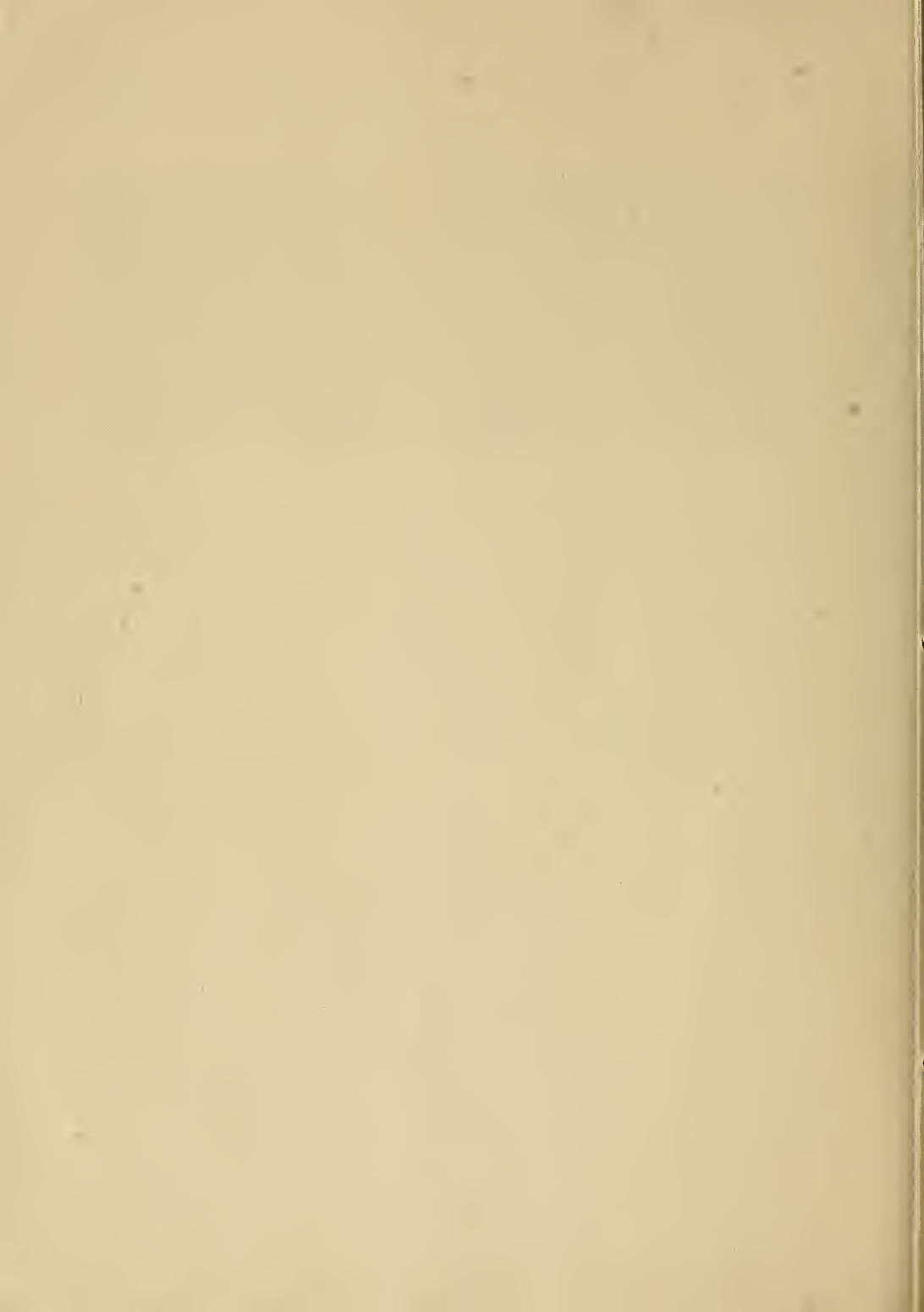
MACHINE PUTTING OUT



HAND PUTTING OUT

PUTTING OUT AND DRYING

1. makes Tanning skins makes them wet and wrinkled.
2. must make We must make the skins smooth.
3. call We call this putting out.
4. take We take some skins to the putting-out machine.
5. put I put a skin between the rolls.
6. put I put my foot on the treadle.
7. rolls The putting-out machine rolls out the wrinkles.
8. am careful I am careful not to get my hands between the rolls.
9. will crush The rolls will crush my hands and arms.
10. take We take some skins to the hand putters out.
11. lay The hand putters out lay the leather on glass tables.
12. put They put out the leather with slickers.
13. smooth The slickers smooth out the wrinkles.
14. is The leather is smooth.
15. hang We hang the leather on hooks to dry.
16. are The hooks are very sharp.
17. scratch If I scratch my finger I must tell my foreman.



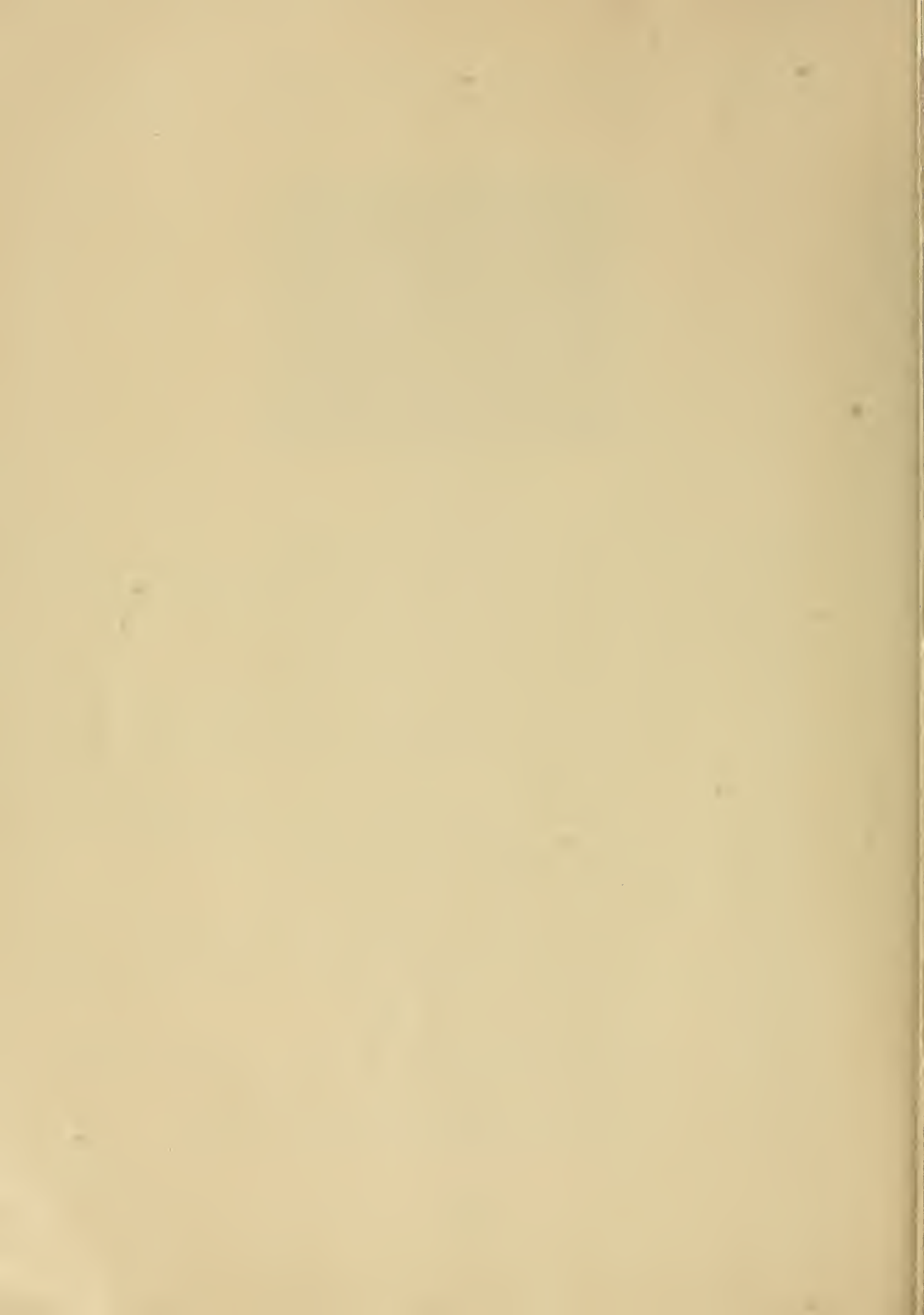
LESSON 20



PADDLE WHEELS

COLORING

- | | |
|-----------------|--|
| 1. color | We color most sheepskins. |
| 2. must sort | We must sort the skins before we color them. |
| 3. puts | The sorter puts the skins in different piles. |
| 4. must not mix | I must not mix the piles. |
| 5. tie | I tie the skins in bundles. |
| 6. take | We take the skins to the color cellar. |
| 7. put | We put the skins into the vat of the paddle wheel. |
| 8. is | There is water in the vat of the paddle wheel. |
| 9. turns | The paddle turns around. |
| 10. washes | The water washes the skins. |
| 11. truck | We truck the skins to the pinwheel. |
| 12. puts | The wheelman puts the skins into a pinwheel. |
| 13. pulls | He pulls the shipper. |
| 14. turns | The pinwheel turns. |
| 15. feeds | The foreman feeds the color into the wheel. |
| 16. goes | The color goes into the skins. |
| 17. stops | The wheelman stops the pinwheel. |
| 18. does | What does a careful wheelman do? |



LESSON 21



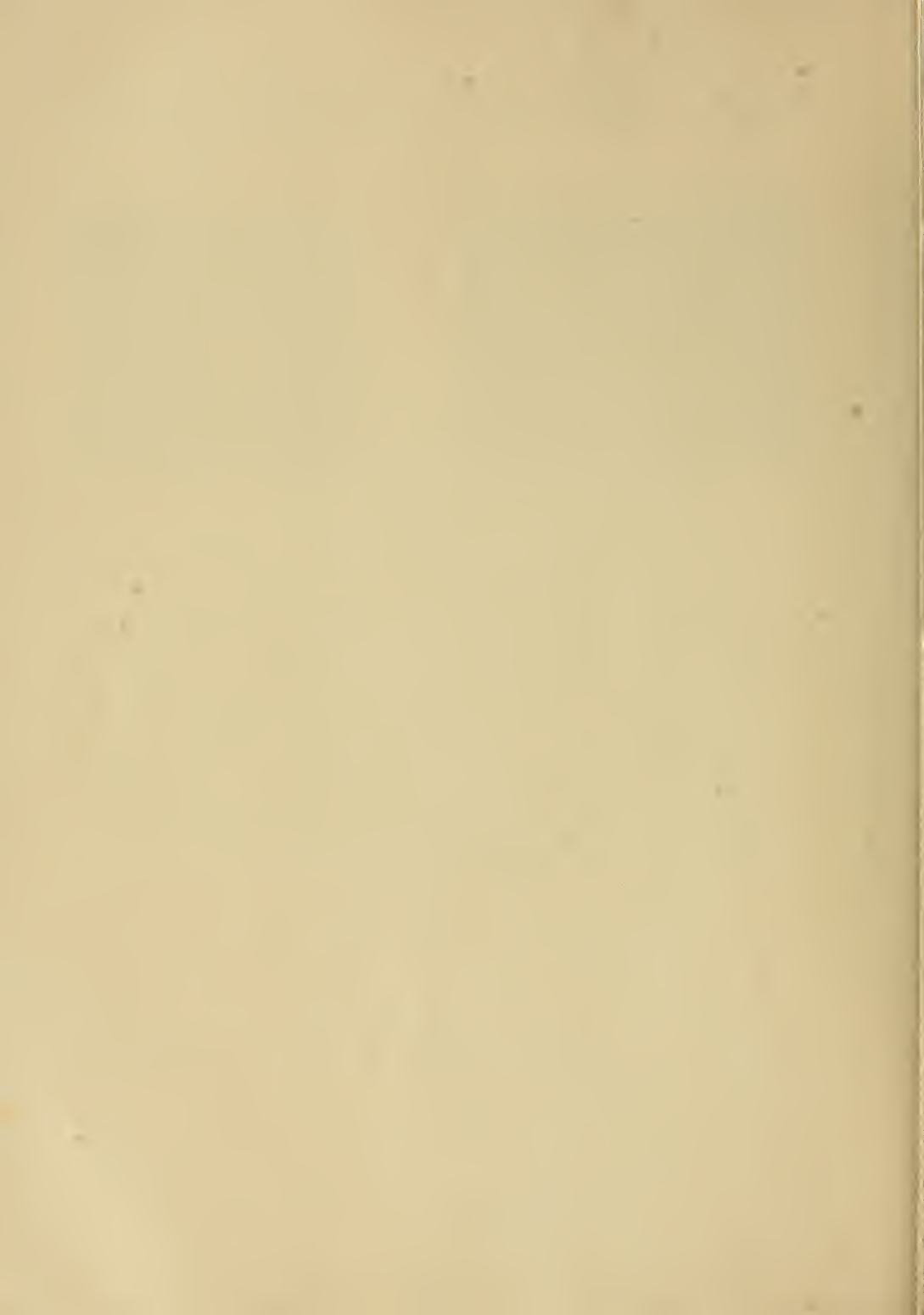
TACKING SHEEPSKINS



FAN USED IN DRYING ROOM

PUTTING OUT AND TACKING

- | | |
|------------------|---|
| 1. makes | Coloring skins makes them wet and wrinkled. |
| 2. must make | We must make the skins smooth. |
| 3. call | We call this putting out. |
| 4. is | What is putting out? (See Lesson 19.) |
| 5. must keep | We must keep the skins smooth. |
| 6. tack | The tackers tack the skins on boards. |
| 7. dry | The skins dry on the tacking boards. |
| 8. take | The strippers take the skins from the boards. |
| 9. hurt | Sometimes tackers hurt their hands. |
| 10. should go | They should go to the doctor. |
| 11. may get | They may get blood-poisoning from the skins. |
| 12. use | Some tanneries use fans in drying skins. |
| 13. must not put | I must not put my hands into the fan. |



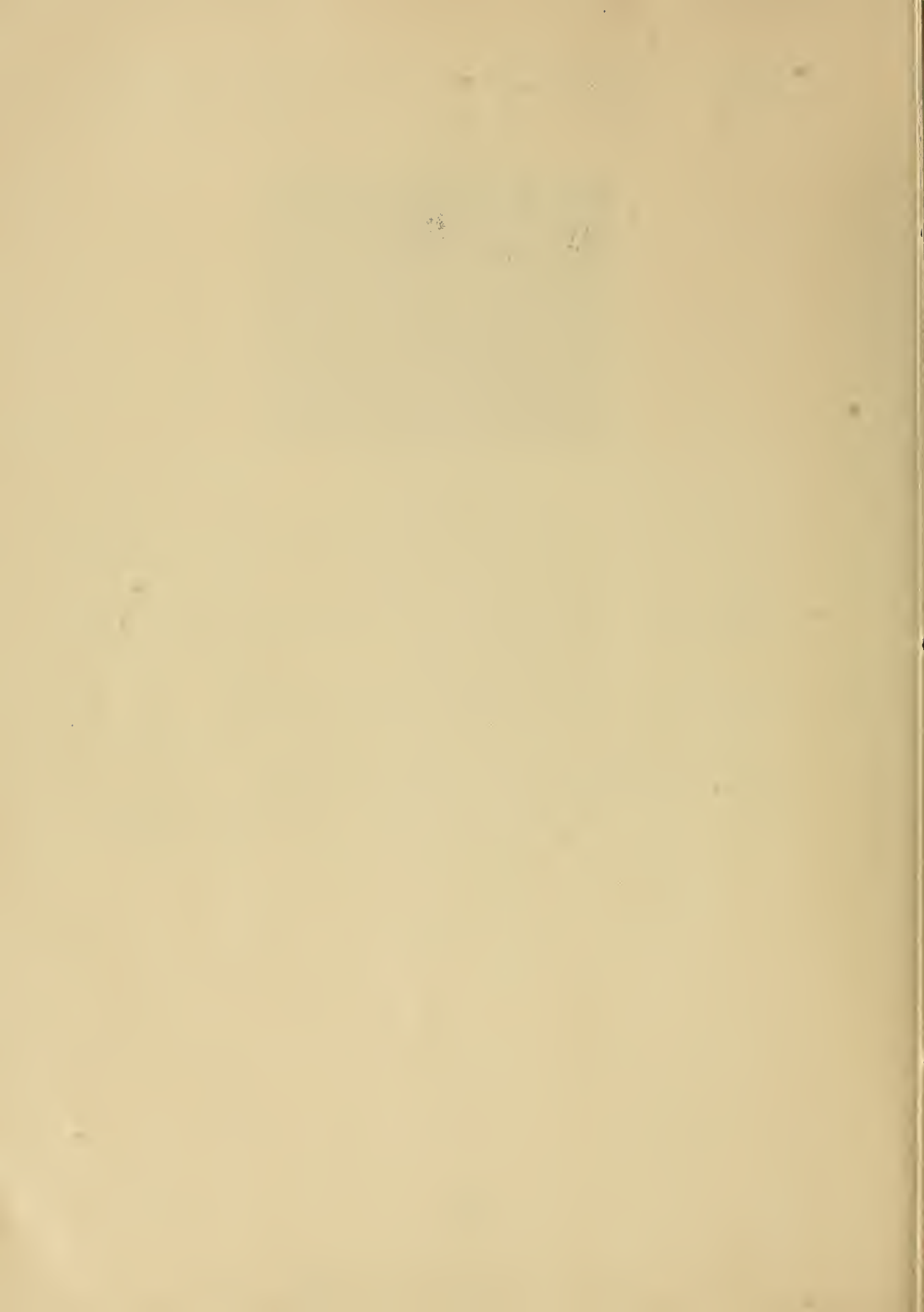
LESSON 22



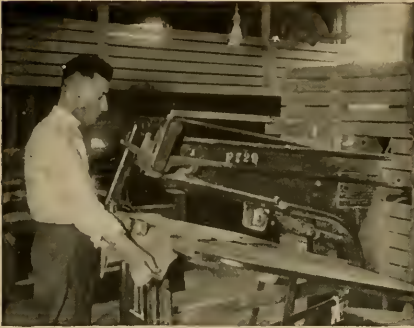
BUFFING WHEEL

BUFFING

- | | |
|-----------------|---|
| 1. finish | We finish sheepskin leather in many different ways. |
| 2. buff | We buff the skins on a buffing machine. |
| 3. does take | The fleshing machine does not take off all the flesh. |
| 4. is rough | The buffing wheel is rough. |
| 5. takes | It takes off the rough pieces of flesh. |
| 6. must be damp | The skins must be damp. |
| 7. put | We put the skins into damp sawdust. |



LESSON 23



BAKER STAKING MACHINE



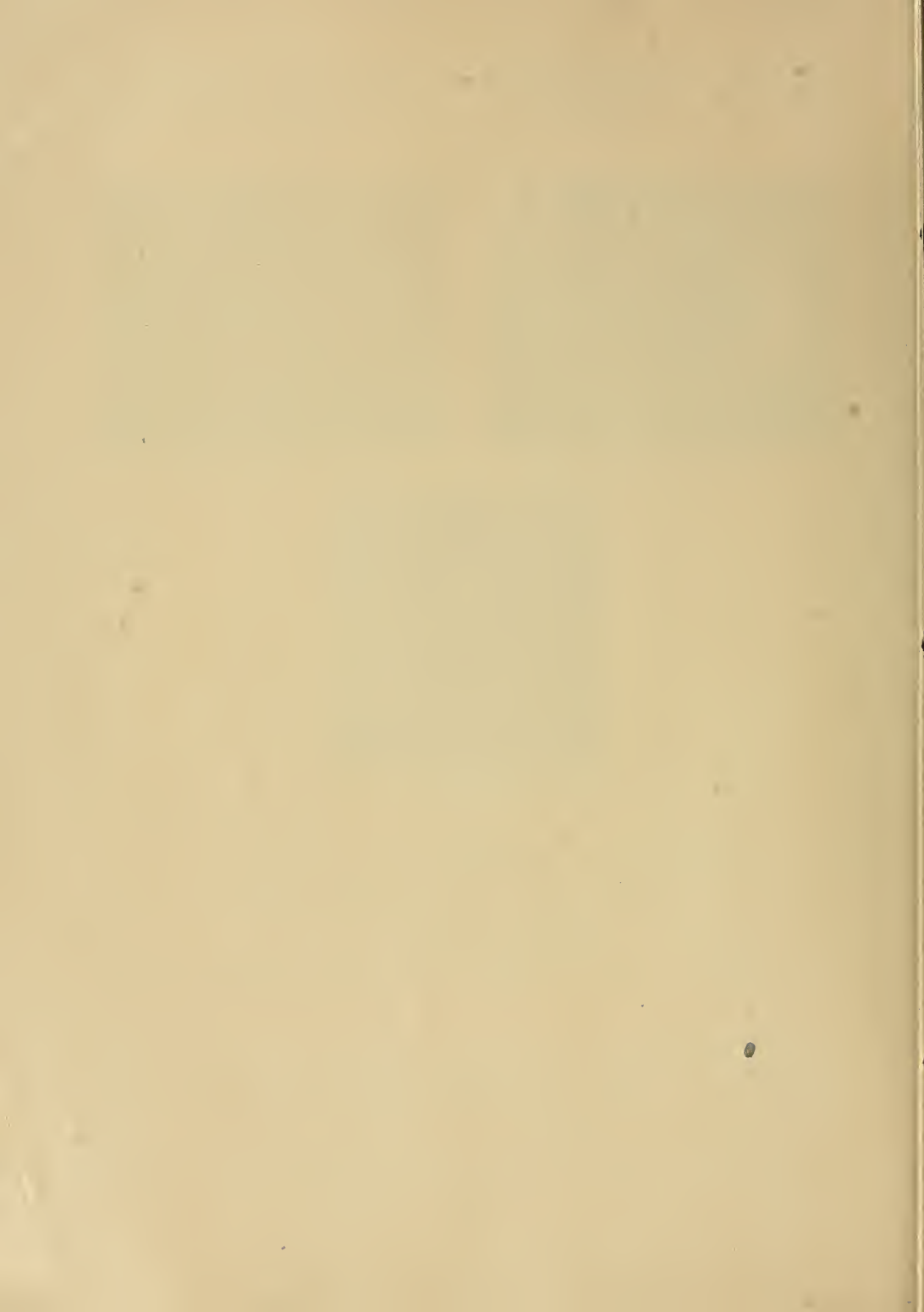
SLOCUM STAKING MACHINE



KNEE STAKING

STAKING

1. must stake We must stake all the skins.
2. put I put the leather between the jaws of the staking machine.
3. makes The staking machine makes the leather soft.
4. must keep I must keep my fingers away from the jaws of the staking machine.
5. are staked Some skins are staked by knee staking.
6. pull The knee staker pulls the skins over a knee stake.
7. pulls He pulls the skins with his hand and knee.



LESSON 24



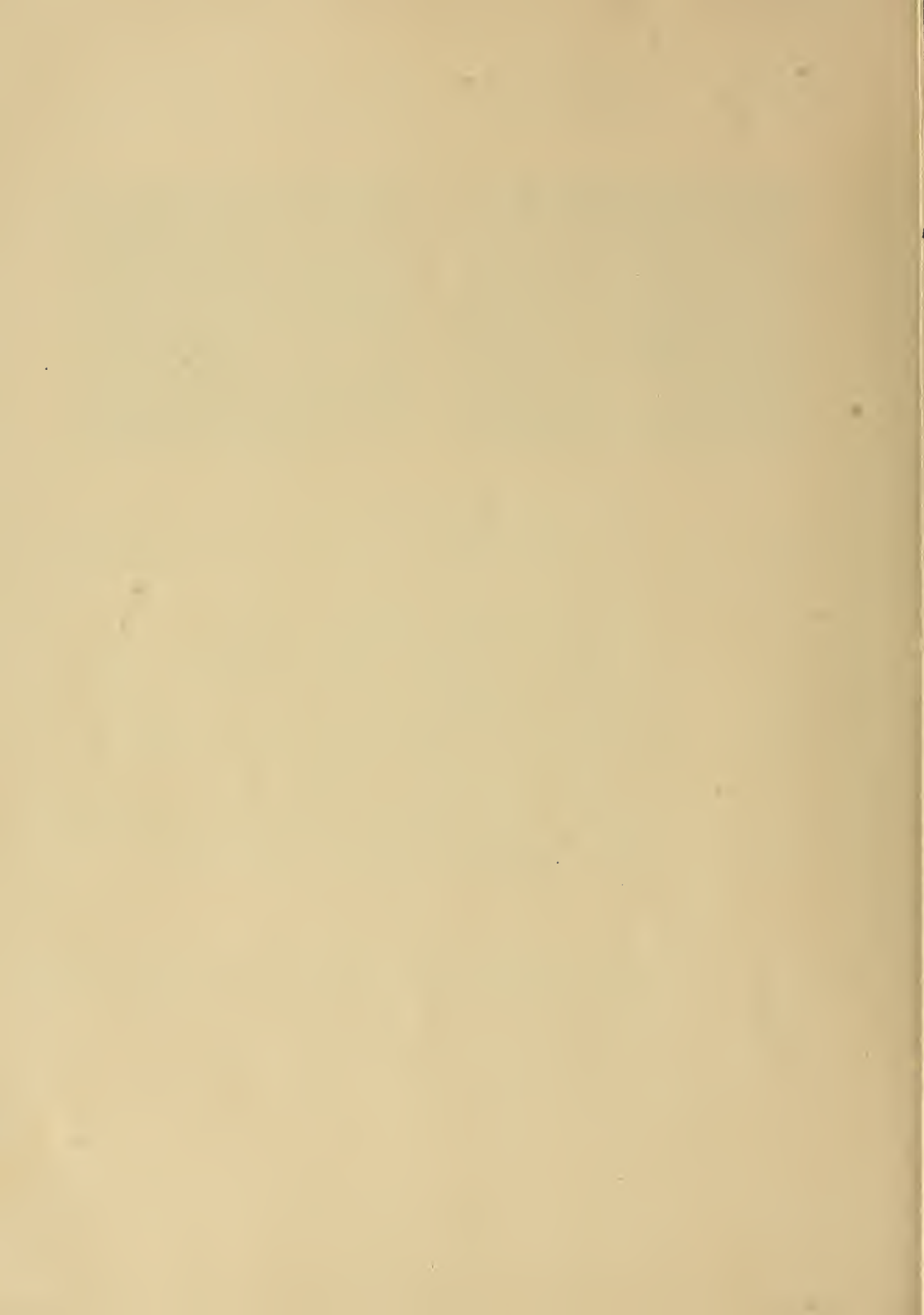
SEASONING AND HANGING



ROLLING JACK

SEASONING, ROLLING AND GLAZING

1. season—to We season skins to make them look better.
 make—look
2. season We season most skins by hand.
3. dip I dip the swab into the seasoning.
4. rub I rub the seasoning over the skin.
5. hang I hang the skin on a hook.
6. season I season some skins two or three times.
7. roll I roll the skins on a rolling-jack.
8. put I put the skin under the arm of the rolling-jack.
9. rolls The rolling-jack rolls the skin smooth.
10. must not let I must not let the roll catch my finger.
 catch
11. put I put the skin under the arm of the glazing-jack.
12. makes— The glazing-jack makes the leather shine.
 shine
13. looks The glazing-jack looks like a rolling-jack.



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